

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 25 (currently amended). A system for controlling a consist of at least a first locomotive having a first locomotive control and a second locomotive having a second locomotive control in response to operator input provided to a master control for the consist, said operator input indicating a desired operating mode from a plurality of operating modes, said operating modes including at least one power operating mode and at least one braking capacity optimization mode, said system comprising:

a communication link providing command information corresponding to the desired operating mode information from the master control;

a first processing module for receiving the command information from the communication link and providing first control information to the first locomotive control for controlling a power operating mode of the first locomotive;

a second processing module for receiving the command information from the communication link and providing second control information to the second locomotive control for controlling a power operating mode of the second locomotive wherein, in at least one of the plurality of modes of operation, the power operating mode of the second locomotive is different as compared to the power operating mode of the first locomotive; and

wherein, the first control information and the second control information specifies the power operating mode of each of the first and second locomotives, respectively, is selected to optimize as a function of the braking capacity of both the first and second locomotives.

Claim 26 (currently amended). The system of claim 25 further comprising a link to a GPS indicating a position of the consist and wherein the power operating mode specified by the

first and second control information is ~~optimized~~ as a function of the position of the consist as indicated by the GPS.

Claim 27 (currently amended). The system of claim 25 wherein the power operating mode of each of the first and second locomotives is a performance parameter, wherein a performance profile of the first and second locomotives is known and wherein each of the first and second operating modes are selected is specified as a function of the performance profile to optimize the performance parameter ~~as a function of the performance profile~~.

Claim 28 (currently amended). The system of claim 25 wherein ~~as the power operating parameter mode~~ of each of the first and second locomotives is a function of a location of a crew member such that the power operating mode of a locomotive in which a crew member is riding is ~~reduced as compared to an~~ less than a power operating parameter mode of a locomotive in which a crew member is not riding.

Claim 29 (original). The system of claim 25 wherein the communication link providing command information from the master control is comprised of a wired communication facility.

Claim 30 (original). The system of claim 25 wherein the communication link providing command information from the master control is comprised of a wireless communication facility.

Claim 31 (currently amended). A system for controlling a consist of at least a first locomotive having a first locomotive control and a second locomotive having a second locomotive control in response to operator input provided to a master control for the consist, said operator input indicating a desired operating mode from a plurality of operating modes, said operating modes including at least one power operating mode and at least one position optimization mode, said system comprising:

a communication link providing command information corresponding to the desired operating mode information from the master control;

a first processing module for receiving the command information from the communication link and providing first control information to the first locomotive control for controlling a power operating mode of the first locomotive;

a second processing module for receiving the command information from the communication link and providing second control information to the second locomotive control for controlling a power operating mode of the second locomotive wherein, in at least one mode of the plurality of operating modes, the power operating mode of the second locomotive is different as compared to the power operating mode of the first locomotive; and

a link to a GPS indicating a position of the consist and wherein the first control information and the second control information specifies the power operating mode is optimized of each of the first and second locomotives, respectively, as a function of the position of the consist as indicated by the GPS.

Claim 32 (currently amended). The system of claim 31 wherein the power operating mode of the first and second locomotives is ~~selected to optimize~~ a function braking capacity of the first and second locomotives.

Claim 33 (currently amended). The system of claim 31 wherein the power operating mode of the first and second locomotives is a performance parameter, wherein a performance profile of the first and second locomotives is known and wherein the first and second operating modes ~~are selected to~~ optimize the performance parameter as a function of each of the performance profiles.

Claim 34 (currently amended). The system of claim 31 wherein ~~an~~ the operating parameter mode the specified by the first and second control information is a function of a location of a crew member such that the specified power operating mode of a locomotive in which a crew member is riding is reduced as compared to less than an power operating parameter mode of a locomotive in which a crew member is not riding.

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Claim 35 (original). The system of claim 31 wherein the communication link providing command information from the master control is comprised of a wired communication facility.

Claim 36 (original). The system of claim 31 wherein the communication link providing command information from the master control is comprised of a wireless communication facility.

Claim 37 (currently amended). A system for controlling a consist of at least a first locomotive having a first locomotive control and a second locomotive having a second locomotive control in response to operator input provided to a master control for the consist, said operator input indicating a desired operating mode from a plurality of operating modes, said operating modes including at least one power operating mode and at least one performance profile optimization mode, said system comprising:

a communication link providing command information corresponding to the desired operating mode information from the master control;

a first processing module for receiving the command information from the communication link and providing first control information to the first locomotive control for controlling a power operating mode of the first locomotive;

a second processing module for receiving the command information from the communication link and providing second control information to the second locomotive control for controlling a power operating mode of the second locomotive wherein, in at least one mode of the plurality of operating modes operation, the power operating mode of the second locomotive is different as compared to the power operating mode of the first locomotive, ~~and~~

~~wherein the said power operating mode of each of the first and second locomotives is a performance parameter, wherein the first control information and second control information specifies a performance profile of the first and second locomotives the power operating mode of each of the first and second locomotives, respectively, and wherein the first and second operating modes are selected to optimize the performance parameter as a function of the performance profiles for the first and second locomotives to optimize the performance parameter.~~

Claim 38 (currently amended). The system of claim 37 wherein the power operating mode of the first and second locomotives is ~~selected to optimize~~ a function of a braking capacity of the first and second locomotives.

Claim 39 (currently amended). The system of claim 37 further comprising a link to a GPS indicating a position of the consist and wherein the power operating mode ~~is optimized~~ specified by the first and second control information is as a function of the position of the consist as indicated by the GPS.

Claim 40 (currently amended). The system of claim 37 wherein ~~as the power operating parameter mode specified by the first and second control information is a function of a location of the crew member such that the specified power operating mode of a locomotive in which a crew member is riding is reduced as compared to less than an a power operating parameter mode~~ of a locomotive in which a crew member is not riding.

Claim 41 (original). The system of claim 37 wherein the communication link providing command information from the master control is comprised of a wired communication facility.

Claim 42 (original). The system of claim 37 wherein the communication link providing command information from the master control is comprised of a wireless communication facility.

Claim 43 (currently amended). A system for controlling a consist of at least a first locomotive having a first locomotive control and a second locomotive having a second locomotive control in response to operator input provided to a master control for the consist, said operator input indicating a desired operating mode from a plurality of operating modes, wherein said operating modes including at least one power operating mode and at least one crew member location optimization mode, said system comprising:

a communication link providing command information corresponding to the desired operating mode information from the master control;

a first processing module for receiving the command information from the communication link and providing first control information to the first locomotive control for controlling a power operating mode of the first locomotive;

a second processing module for receiving the command information from the communication link and providing second control information to the second locomotive control for controlling a power operating mode of the second locomotive wherein, in at least one mode of operation, the power operating mode of the second locomotive is different as compared to the power operating mode of the first locomotive; and

wherein the first and second control information specifies ~~an operating parameter the power operating mode of each of the first and second locomotives, respectively, as a function of the location of crew member such that a power operating mode of a locomotive in which a crew member is riding is reduced as compared to less than an~~ a power operating parameter mode of a locomotive in which a crew member is not riding.

Claim 44 (currently amended). The system of claim 43 wherein the power operating mode of the first and second locomotives ~~is selected to optimize a~~ function of a braking capacity of the first and second locomotives.

Claim 45 (currently amended). The system of claim 43 further comprising a link to a GPS indicating a position of the consist and wherein the power operating mode ~~is optimized~~ specified by the first and second control information is as a function of the position of the consist as indicated by the GPS.

Claim 46 (currently amended). The system of claim 43 wherein the power operating mode of each of the first and second locomotives is a performance parameter, wherein a performance profile of each of the first and second locomotives is known and wherein the first and second power operating modes are selected specified to optimize the performance parameter as a function of the performance profile.

Claim 47 (original). The system of claim 43 wherein the communication link providing command information from the master control is comprised of a wired communication facility.

Claim 48 (original). The system of claim 43 wherein the communication link providing command information from the master control is comprised of a wireless communication facility.

Claim 49 (currently amended). In a system responsive to an operator for controlling in response to an operator a consist of at least first and second locomotives having a plurality of discrete operating modes, said operating modes including at least one power operating mode and at least one braking capacity optimization mode, wherein the system includes:

an operator control for use by the operator to indicate a desired operating mode from the plurality of discrete operating modes of the consist, said desired operating mode being the braking capacity optimization mode;

a first controller for controlling a discrete power operating mode of the first locomotive;

a second controller for controlling a discrete power operating mode of the second locomotive;

a communication link for communicating the desired operating mode of the consist to the first and second controllers; further comprising:

a first module between the operator control and the first control, the first module receiving the desired operating mode via the communication link and selectively providing a first modified operating mode to the first controller;

a second module between the operator control and the second control, the second module receiving the desired operating mode via the communication link and selectively providing a second modified operating mode to the second controller;

wherein, in at least one mode of the plurality of discrete operating modes ~~operation of~~ the consist, the power operating mode of the first and second locomotives is different as compared to the desired operating mode of the consist; ~~and~~

wherein the first controller and the second controller specifies the power operating mode of each of the first and second locomotives, respectively, ~~is selected to optimize as a~~ function of a braking capacity of the first and second locomotives.

Claim 50 (original). The system of claim 49 further comprising a link to a GPS indicating a position of the consist and wherein the power operating mode is optimized as a function of the position of the consist as indicated by the GPS.

Claim 51 (original). The system of claim 49 wherein the power operating mode of the first and second locomotives is a performance parameter, wherein a performance profile of the first and second locomotives is known and wherein the first and second operating modes are selected to optimize the performance parameter as a function of the performance profile.

Claim 52 (currently amended). The system of claim 49 wherein an power operating ~~parameter~~ mode of a locomotive in which a crew member is riding is ~~reduced as compared to~~ less than an power operating parameter mode of a locomotive in which a crew member is not riding.

Claim 53 (original). The system of claim 49 wherein the communication link for communicating the desired operating mode of the consist to the first and second controllers is comprised of a wired communication facility.

Claim 54 (original). The system of claim 49 wherein the communication link for communicating the desired operating mode of the consist to the first and second controllers is comprised of a wireless communication facility.

Claim 55 (currently amended). In a system responsive to an operator for controlling ~~in response to an operator~~ a consist of at least first and second locomotives having a plurality of

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discrete operating modes, said operating modes including at least one power operating mode and at least one position optimization mode, wherein the system includes:

an operator control for use by the operator to indicate a desired operating mode from the plurality of discrete operating modes of the consist, said desired operating mode being the position optimization mode;

a first controller for controlling a ~~discrete~~ power operating mode of the first locomotive;

a second controller for controlling a ~~discrete~~ power operating mode of the second locomotive;

a communication link for communicating the desired operating mode of the consist to the first and second controllers; further comprising:

a first module between the operator control and the first control, the first module receiving the desired operating mode via the communication link and selectively providing a first modified operating mode to the first controller;

a second module between the operator control and the second control, the second module receiving the desired operating mode via the communication link and selectively providing a second modified operating mode to the second controller;

a link to a GPS indicating a position of the consist, wherein said first and second controller specifies and wherein the power operating mode is optimized of each of the first and second locomotives, respectively, as a function of the position of the consist as indicated by the GPS; and

wherein, in at least one mode of the plurality of discrete operating modes ~~operation~~ of the consist, the power operating mode of the first and second locomotives is different as compared to the desired operating mode of the consist.

Claim 56 (currently amended). The system of claim 55 wherein the power operating mode of the first and second locomotives is ~~selected to optimize~~ a function of a braking capacity of the first and second locomotives.

Claim 57 (original). The system of claim 55 wherein the power operating mode of the first and second locomotives is a performance parameter, wherein a performance profile of

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the first and second locomotives is known and wherein the first and second operating modes are selected to optimize the performance parameter as a function of the performance profile.

Claim 58 (currently amended). The system of claim 55 wherein ~~an~~ power operating parameter mode of a locomotive in which a crew member is riding is ~~reduced as compared to less than an~~ power operating parameter mode of a locomotive in which a crew member is not riding.

Claim 59 (original). The system of claim 55 wherein the communication link for communicating the desired operating mode of the consist to the first and second controllers is comprised of a wired communication facility.

Claim 60 (original). The system of claim 55 wherein the communication link for communicating the desired operating mode of the consist to the first and second controllers is comprised of a wireless communication facility.

Claim 61 (currently amended). In a system responsive to an operator for controlling ~~in response to an operator~~ a consist of at least first and second locomotives having a plurality of discrete operating modes, said operating modes including at least one power operating mode and at least one performance profile optimization mode, wherein the system includes:

an operator control for use by the operator to indicate a desired operating mode from the plurality of discrete operating modes of the consist, said desired operating mode being the performance profile optimization mode;

a first controller for controlling a ~~discrete~~ power operating mode of the first locomotive;

a second controller for controlling a ~~discrete~~ power operating mode of the second locomotive;

a communication link for communicating the desired operating mode of the consist to the first and second controllers; further comprising:

a first module between the operator control and the first control, the first module receiving the desired operating mode via the communication link and selectively providing a first modified operating mode to the first controller;

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a second module between the operator control and the second control, the second module receiving the desired operating mode via the communication link and selectively providing a second modified operating mode to the second controller;

wherein, in at least one mode of the plurality of discrete operating modes operation of the consist, the power operating mode of the first and second locomotives is different as compared to the desired operating mode of the consist; ~~and~~

~~wherein the~~ said power operating mode of each of the first and second locomotives is a performance parameter, wherein a performance profile of the first and second locomotives is known; and wherein the first controller and the second controller specifies the power operating mode of each of the first and second locomotives, respectively, operating modes are selected to optimize the performance parameter as a function of the performance profile profiles for the first and second locomotives to optimize the performance parameter.

Claim 62 (currently amended). The system of claim 61 wherein the power operating mode of the first and second locomotives is ~~selected to optimize~~ a function of a braking capacity of the first and second locomotives.

Claim 63 (original). The system of claim 61 further comprising a link to a GPS indicating a position of the consist and wherein the power operating mode is optimized as a function of the position of the consist as indicated by the GPS.

Claim 64 (currently amended). The system of claim 61 wherein an power operating parameter mode of a locomotive in which a crew member is riding is ~~reduced as compared to less than an power operating parameter mode~~ of a locomotive in which a crew member is not riding.

Claim 65 (original). The system of claim 61 wherein the communication link for communicating the desired operating mode of the consist to the first and second controllers is comprised of a wired communication facility.

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Claim 66 (original). The system of claim 61 wherein the communication link for communicating the desired operating mode of the consist to the first and second controllers is comprised of a wireless communication facility.